BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The disclosure may best be understood by reference to the following description taken in conjunction with the accompanying drawings in which:

[0013] FIG. **1**A illustrates a system used for local game generation for purposes of spectating an event (e.g., live game play of a video game), wherein the spectator may switch from watching the event to actively participating in a simulation of the event, in accordance with one embodiment of the present disclosure.

[0014] FIG. **1**B illustrates an example neural network used to build an artificial intelligence (AI) model, in accordance with one embodiment of the present disclosure.

[0015] FIG. **2**A illustrates a system providing gaming control to one or more users playing one or more gaming applications that are executing locally to the corresponding user, and wherein local game generation may be implemented for spectating a live event and active participation in a simulation of the event by a spectator, in accordance with one embodiment of the present disclosure.

[0016] FIG. **2**B illustrates a system providing gaming control to one or more users playing a gaming application as executed over a cloud game network, and wherein back-end server support may support game generation for spectating a live event and active participation in a simulation of the event by a spectator, in accordance with one embodiment of the present disclosure.

[0017] FIG. **3**A illustrates local game generation for purposes of playing an event (e.g., live game play of a video game), wherein a period of the live event may be partially simulated, in accordance with one embodiment of the present disclosure.

[0018] FIG. **3**B illustrates local game generation for purposes of spectating an event (e.g., live game play of a video game), and for purposes of active participation in a simulation of the event, in accordance with one embodiment of the present disclosure.

[0019] FIG. **4** is a flow diagram illustrating steps in a method for local game generation for spectating an event (e.g., live game play of a video game), and active participation in a simulation of the event, in accordance with one embodiment of the present disclosure.

[0020] FIG. **5** illustrates a timeline showing a live event (e.g., live game play by one or more players in a gaming session), a spectator spectating the event through local game generation, and the spectator actively participation in a simulation of the event, in accordance with one embodiment of the present disclosure.

[0021] FIG. **6** illustrates the multiplicity of sharing and generating of local game slices based on a live event (e.g., live game play by one or more players in a gaming session), in accordance with one embodiment of the present disclosure.

[0022] FIG. **7** illustrates components of an example device that can be used to perform aspects of the various embodiments of the present disclosure.

DETAILED DESCRIPTION

[0023] Although the following detailed description contains many specific details for the purposes of illustration, anyone of ordinary skill in the art will appreciate that many variations and alterations to the following details are within the scope of the present disclosure. Accordingly, the aspects of the present disclosure described below are set forth without any loss of generality to, and without imposing limitations upon, the claims that follow this description.

[0024] Generally speaking, the various embodiments of the present disclosure describe systems and methods providing for local game generation for purposes of spectating an event (e.g., live game play of a video game), wherein the spectator may switch from watching the event to actively participating in a simulation of the event (e.g., game slice). For example, the spectator may be spectating or watching a live game play through renderings of the video game created through a game engine running locally, in which case they can switch to playing the video game through their locally running game engine that is executing the game slice. That is, the spectator may switch from watching an event to actively participating in a simulation of the in-game environment of the event. In particular, a generic game environment renderer is run locally and is loaded with models of the game to allow it to render the in-game environment in near real time from a stream of game meta-data for purposes of spectating, in one embodiment. Also, if such game play (e.g., live event) is done through streaming or online gaming, then the game slice can be joined without a delay, in one embodiment. In particular, the game play of the game slice as performed by the spectator is done in a copy of the in-game environment so that the spectator can experience the game play and in-game environment set up from the point of view of a player without having an effect on the actual game play. Such game play may have things unlocked to allow spectators to more easily wander around and explore the game environment.

[0025] Throughout the specification, the reference to "video game" or "gaming application" is meant to represent any type of interactive application that is directed through execution of input commands. For illustration purposes only, an interactive application includes applications for gaming, word processing, video processing, video game processing, etc. Further, the terms video game and gaming application are interchangeable.

[0026] With the above general understanding of the various embodiments, example details of the embodiments will now be described with reference to the various drawings.

[0027] FIG. **1**A illustrates a system **10** used for local game generation for purposes of spectating an event (e.g., live game play of a video game), wherein the spectator may switch from watching the event to actively participating in a simulation of the event (e.g., through a game slice), in accordance with one embodiment of the present disclosure.

[0028] As shown in FIG. **1**A, the video game (e.g., game logic **177**) may be executing locally at a client device **100** of the user **5**, or the video game (e.g., game logic **277**) may be executing at a back-end game executing engine **211** operating at a back-end game server **205** of a cloud game network or game cloud system. The game executing engine **211** may be operating within one of many game processors **201** of game server **205**. In either case, the cloud game network is configured to provide support for spectating an event (e.g., live or recorded) and switch to actively participating in a simulation of the event through a game slice, wherein the spectating and the game slice may be executing on a local device or a back-end server. Further, the gaming application may be executing in a single-player mode, or multi-player mode, wherein embodiments of the present